

### **Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

Claim 1. (currently amended) A magnetic random access memory circuit, comprising:

a sensor for producing a sensor signal representing a sensed external condition that affects performance of the magnetic memory; and

a compensation circuit for compensating for the sensed external condition;

wherein the compensation circuit is configured to adjust the write current for word and bit lines of the magnetic memory by an amount required to substantially compensate for the effect of the sensed external condition on the write current required to reliably write data.

2. (cancelled)

3. (original) The circuit of claim 1 wherein the compensation circuit is configured to reduce the write current for the word and bit lines by an amount required to substantially compensate for a sensed external magnetic field.

4. (original) The circuit of claim 1 wherein the compensation circuit comprises a magnetic field generator that generates a compensating magnetic field to substantially compensate for the sensed external condition.

5. (original) The circuit of claim 4 wherein the magnetic field generator comprises a solenoid for generating the compensating magnetic field.

6. (original) The circuit of claim 1 wherein the sensor comprises a magnetometer for sensing an external magnetic field.

7. (original) The circuit of claim 6 wherein the magnetometer is integrated with the magnetic random access memory circuit in a single package.

8. (original) The circuit of claim 6 wherein the magnetometer is integrated with the magnetic random access memory circuit in a single integrated circuit.

9. (original) The circuit of claim 1 wherein the sensor comprises a thermocouple for sensing a temperature of an operating environment of the magnetic random access memory circuit.

10. (original) The circuit of claim 9 wherein the compensation circuit comprises a temperature controller for altering the temperature of the operating environment.

11. (original) The circuit of claim 1 wherein the compensation circuit comprises a remote memory for storing compensation information.

12. (currently amended) A method of compensating for changes in an operating environment of a magnetic memory array comprising the steps of:

sensing a change in the operating environment of the magnetic memory array;

and

compensating for the sensed change in the operating environment; and

adjusting the write current for word and bit lines of the magnetic memory by an amount required to substantially compensate for the effect of the sensed external condition on the write current required reliably to write data.

13. (original) The method of claim 12 wherein sensing a change in the operating environment comprises sensing a change in a local magnetic field.

14. (original) The method of claim 13 wherein compensating for the sensed change comprises adjusting a write current for word and bit lines of the magnetic memory array by an amount required to compensate for the sensed change.

15. (original) The method of claim 14 wherein compensating for the sensed change comprises reducing the write current for the word and bit lines by an amount required to compensate for the sensed change.

16. (original) The method of claim 12 wherein the sensed change is a change in a local magnetic field and the method comprises generating a compensating magnetic field to compensate for the sensed change.

17. (original) The method of claim 16 comprising generating the compensating field with a solenoid.

18. (original) The method of claim 12 wherein the sensed change is a change in a local temperature.

19. (original) The method of claim 18 wherein compensating for the sensed change comprises maintaining the local temperature at a substantially constant temperature.

20. (currently amended) An information handling system comprising:  
a first magnetic memory array;  
a first sensor positioned near said first magnetic memory array for sensing a local operating condition of said first magnetic memory array; and  
a first compensation circuit for substantially compensating for said sensed local operating condition;  
wherein the system is configured to adjust the write current for word and bit lines of the magnetic memory by an amount required to substantially compensate for the effect of the sensed external condition on the write current required reliably to write data.

21. (original) The information handling system of claim 20 further comprising:  
a second magnetic memory array;  
a second sensor positioned near said second magnetic memory array for sensing a local operating condition of said second magnetic memory array; and  
a second compensation circuit for substantially compensating for said sensed local operating condition.

22. (original) The information system of claim 21 further comprising a network connection for transferring information between said first magnetic memory array and said second magnetic memory array.

23. (original) The information system of claim 22 comprising a remote memory that is not affected by local conditions for storing compensation information used by said compensation circuits.